

CLMPTO 10/18/04 JW

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Amend Claims 1-6

Claim 1 (Currently Amended) A communication for voice telephones installed in a LAN comprising a LAN switching unit for switching and connecting a plurality of interfaces incorporated, and a plurality of LAN hosts accommodating equipment connected to the LAN switching unit via the interfaces, respectively, and for performing data communication over the LAN, said communication comprising:

- a LAN interface connected to the LAN switching unit;
- at least one voice telephone; and
- at least one set of physical sets of voice telephone interfaces connected to the at least one or plurality of voice telephones provided with the equipment, wherein digital or analog voice data transmitted and received by the at least one set of physical sets of the telephone interfaces are converted into MAC frames of IP packets of a fixed length, and only the digital or analog voice data converted into the MAC frames of IP packets are relayed at the LAN interface side.

Claim 2 (Currently Amended) A communication for voice telephones according to Claim 1, wherein further comprising:

- a CPU; and

- a second LAN interface for performing transmission and reception of data between a CPU incorporated therein and one of the LAN hosts is provided in addition to the LAN interface connected to the LAN switching unit.

Claim 3 (Currently Amended) A communication for voice telephone according to Claim 1, comprising a function of converting signals from circuits of analog telephone networks subscribers are converted into call control protocols according to TCP/IP so as to be able to accommodate the analog telephone subscribers' terminals.

Claim 4 (Currently Amended) A communication for voice telephone according to Claim 1, further comprising:

- a CPU; and
- a second LAN interface for performing transmission and reception of data with a CPU incorporated therein, apart from the LAN interface connected to the LAN switching unit, having a function of converting and relaying the digital or analog voice data received from the plurality of at least one voice telephones accommodated therein to converted into TCP/IP packets or UDP/IP packets, and transmitting and receiving the TCP/IP packets or UDP/IP packets are transmitted and received via the second LAN interface.

Claim 5 (Currently Amended) A communication system for voice telephones according to Claim 4, further comprising a router connected to the second LAN interface for connecting the second LAN interface to either the outside of the LAN or via LAN to LAN system.

Claim 6 (Currently Amended) A method of communication over a LAN comprising a plurality of LAN hosts accommodated coupled to computing equipment for performing data communication, a plurality of the concentrators for coupling to voice telephones according to Claim 4, and a LAN switching unit, having a plurality of ports and for switching and connecting between the plurality of the LAN hosts, and the plurality of the concentrators for voice telephones, wherein the method comprising the steps of:  
performing call control between a plurality of the voice telephones in response to a call request received from each of the concentrators for voice telephones in performed by a CPU or work station incorporated with the computing equipment in each of the LAN hosts wherein the CPU or work station issues a call request to the call control unit and the call control unit issues a call request to the call control unit, and the call control unit issues a call request to the call control unit, and the call control unit issues a call request to the call control unit.

## Cancel Claims 7-9

## Add New Claims 10-22

Claim 10 (New) A telecommunication apparatus for voice telephones installed in a LAN including a plurality of LAN equipment, the telecommunication apparatus comprising:

at least one LAN interface coupled to the LAN equipment;

a CPU;

at least one voice telephone;

a set of voice telephone interfaces adapted to receive and transmit digital and analog voice data or call control data between the CPU and for at least one voice telephone, wherein the CPU is adapted to convert the digital and analog voice data or call control data into IP packets or MAC frames and transmit the IP packets or MAC frames to the at least one LAN interface wherein the set of voice telephone interfaces are adapted to perform a ROUTING function.

Claim 11 (New) The telecommunication apparatus of claim 10, further comprising a router connected to at least one LAN interface and to a LAN both or outside of the LAN.

Claim 12 (New) The telecommunication apparatus of claim 10, wherein the LAN equipment includes one of a LAN host and a LAN switching unit.

Claim 13 (New) The telecommunications apparatus of claim 10, further comprising a LAN device coupled to the CPU and voice telephone interface for assembling and disassembling a MAC frame.

Claim 14 (New) The telecommunications apparatus of claim 10, wherein the call control data are converted into a call control protocol according to T.308.

Claim 15 (New) A telecommunications apparatus for voice telephones installed in a LAN including a plurality of LAN equipment, the telecommunications apparatus comprising:

at least one LAN interface coupled to the LAN equipment;

a CPU;

at least one voice telephone;

a set of voice telephone interfaces adapted to receive and transmit digital and analog voice data or call control data between the CPU and the at least one voice telephone, wherein the CPU is adapted to convert the digital and analog voice data or call control data into TCP/IP packets or IEEE IP packets and transmit the packets to the at least one LAN interface.

Claim 16 (New) The telecommunications apparatus of claim 15, further comprising a router connected to the at least one LAN interface and to a LAN hub.

Claim 17 (New) The telecommunications apparatus of claim 15, further comprising a router connected to the at least one LAN interface and to an external network.

Claim 18 (New) A method of communication over a LAN, comprising:

receiving and transmitting digital and analog voice data or call control data between a voice telephone interface and a voice telephone;

receiving and transmitting the digital and analog voice data or call control data between the voice telephone interface and a CPU;

converting the digital and analog voice data or call control data into IP packets or MAC frames with the CPU; and

transmitting the IP packets or MAC frames from the CPU to a LAN interface.

Claim 19 (New) The method of claim 18, further comprising transmitting the IP packets or MAC frames from the LAN interface to a router.

Claim 20 (New) The method of claim 18, further comprising transmitting the IP packets or MAC frames from the router to an external network.

Claim 21 (New) The method of claim 18, further comprising transmitting the IP packets or MAC frames to a LAN hub.

Claim 22 (New): The method of claim 16, further comprising converting the signal and testing value data into TCP/IP packets or GPRS packets with the CPU.